

CLAIMS

I claim:

- 5           1. A method for retrieving images for display on an  
output device, said method comprising:  
            retrieving a bitmap from a cache, when the  
            bitmap generates a match with an image selected for  
            display on said output device; and  
10           storing in the cache a bitmap representing the  
selected image, if the selected image does not  
generate a match with any bitmap stored on the  
cache.
- 15           2. The method of Claim 1, wherein:  
            the image selected for display comprises a  
character associated with a font set.
3. The method of Claim 1, wherein said storing  
20 further comprises:  
            assigning a unique identifier to a bitmap  
stored in the cache.
4. The method of Claim 3, wherein said method  
25 further comprises:  
            including the unique identifier of a bitmap  
stored in the cache in a file sent to an output  
device.
- 30           5. The method of Claim 4 wherein said method  
further comprises:  
            retrieving from the cache the bitmap  
corresponding to the unique identifier in response  
to a request to display said file on said output  
35 device.
6. The method of Claim 1 wherein:

the cache comprises a linked list data structure having length elements.

5        7.    The method of Claim 6, wherein  
         a length element of the linked list data  
         structure is associated with a unique length value  
         and the elements of the linked list data structure  
         are organized in order of increasing length values.

10       8.    The method of Claim 6 wherein storing a bitmap  
         in the cache further comprises:  
         associating the bitmap with the length element  
         of the linked list data structure corresponding to a  
         length value of the bitmap.

15       9.    The method of Claim 8, wherein associating the  
         bitmap with the length element corresponding to the  
         length value of the bitmap further comprises:

20       associating the bitmap with a width element  
         corresponding to a width value of the bitmap,  
         wherein the width element is associated with the  
         length element corresponding to the length value of  
         the bitmap.

25       10.   The method of Claim 1, wherein  
         the output device comprises a printer.

30       11.   A computer program product comprising computer  
         program code for a method for retrieving images for  
         display on an output device, said method comprising:  
         retrieving a bitmap from a cache, when the  
         bitmap generates a match with an image selected for  
         display on said output device; and  
         storing in the cache a bitmap representing the  
35       selected image if the selected image does not  
         generate a match with any bitmap stored in the  
         cache.

12. The computer program product of Claim 11,  
wherein

5           the image selected for display comprises a  
character associated with a font set.

13. The computer program product of Claim 11,  
wherein said storing further comprises:

10           assigning a unique identifier to a bitmap  
stored in the cache.

14. The computer program product of Claim 13,  
wherein said method further comprises:

15           including the unique identifier of a bitmap  
stored in the cache in a file sent to an output  
device.

15. The computer program product of Claim 14,  
wherein said method further comprises:

20           retrieving from the cache the bitmap  
corresponding to the unique identifier in response  
to a request to display said file on said output  
device.

25           16. The computer program product of Claim 11,  
wherein:

            the cache comprises a linked list data  
structure having length elements.

30           17. The computer program product of Claim 16,  
wherein:

            a length element of the linked list data  
structure is associated with a unique length value  
and the elements of the linked list data structure  
35           are organized in order of increasing length values.

18. The computer program product of Claim 17 wherein said storing a bitmap in the cache further comprises:

5 associating the bitmap with the length element of the linked list data structure corresponding to a length value of the bitmap.

19. The computer program product of Claim 11, wherein said associating the bitmap with the length element corresponding to the length value of the bitmap further comprises:

15 associating the bitmap with a width element corresponding to a width value of the bitmap, wherein the width element is associated with the length element corresponding to the length value of the bitmap.

20. The computer program product of Claim 11, wherein the output device comprises a printer.

21. An apparatus comprising:  
a processor; and  
a memory coupled to said processor, and storing  
25 a method of retrieving images for display on an output device wherein upon execution of said method on said processor, said method comprises:

30 retrieving a bitmap from a cache, wherein the bitmap generates a match with an image selected for display on said output device; and  
storing in the cache a bitmap representing the selected image, if the selected image does not match with any bitmap stored on the cache.

35 22. The apparatus of claim 21, wherein:  
the image selected for display comprises a character associated with a font set.

23. An output file format, comprising:

a cache section including at least one bitmap associated with a unique identifier; and

5 a data section including a plurality of occurrences of at least one unique identifier associated with the at least one bitmap in the cache section, wherein each occurrence of a unique identifier is associated with a specified position,  
10 and for each occurrence of a unique identifier in the data section, an image represented by the bitmap associated with the unique identifier is displayed on an output device in the specified position.